pedicle by the actual cautery, so successfully practised by Mr. Baker Brown; the other by means of the metallic ligature.

"The actual cautery does not always succeed; and the case above described clearly proves that we have a safe and sure resource in the silver ligature."

OPHTHALMOLOGY.

37. *A Modification of the Operation for Strabismus.*—Dr. RICHARD LIEBREICH, Professor of Ophthalmology, Paris, in a memoir on this subject, a copy of which he has politely sent us, states: "It is well known that, if the internal rectus muscle be divided in the manner now generally practised, it is possible to correct a squint of from 2 to 2½ lines in adults, and from 2½ to 3 lines in children. But, if the deviation exceed this extent, it will be necessary to perform two, three, or even more, successive operations."

To remedy, if possible, these defects, Prof. L. determined to investigate, with greater accuracy, *first*, the anatomical relations of the muscles, with regard to the capsule of Tenon, the sclerotic, conjunctiva, caruncle, etc.; and, *second*, the mechanical effect of the operation for strabismus.

From this investigation he has been led to call special attention to three points, as being particularly important with regard to the performance of the operation for strabismus.

"1. The connection of the muscle with the capsule of Tenon is twofold. On the one hand, there is the annular connection of the posterior capsule and its sheath-like processes (which are reflected towards the orbit) with the belly of the muscle; on the other, the firm adhesion of the anterior half of the capsule to the surface of the end of the muscle, which penetrates into the capsule.

"2. The conjunctiva is firmly connected with the outer surface of the capsule of Tenon, from the edge of the cornea to an irregularly circular, sharply defined, marginal line; and, consequently, it stands in a very important relation to the muscles of the eye.

"3. The caruncle, together with the semilunar flap, rest upon a band-like ligament, which passes from the capsule of Tenon toward the edge of the orbit. Now, when the internal rectus is contracted, and the eye rolled inwards, this band is rendered tense; and the caruncle, which is fixed to it, is consequently drawn in towards the internal surface of the orbit. But the outer edge of the caruncle, together with the semilunar fold and an adjoining portion of conjunctiva, are drawn backwards into a furrow. This is partly due to the fact that, during the movements of the eye, the conjunctiva lies, up to a certain point, in close apposition to the eyeball; and partly also to the fact that, when the muscle contracts, and on account of its connection with the anterior half of the capsule, draws the latter backwards, it is necessarily followed by the conjunctiva (which is likewise connected with the capsule), by the semilunar fold and the caruncle.

"From a consideration of the first of these three points, we learn with regard to the mechanical effect of the operation for strabismus, that a division of the insertion of a muscle can only be brought about by a division of the portion of anterior capsule which covers the muscle. For this portion, which passes over the muscle to become attached to the sclerotic just before the insertion of the tendon, keeps the muscle in a fixed position with regard to the sclerotic; so that, if we attempt to sever the tendon from the sclerotic without dividing this portion of the capsule, the tendon would become reunited exactly at its original point of insertion; so that, in fact, it would not have receded at all. It would, however, be not only very difficult, but almost impossible, to avoid incising this portion of the capsule, as, on account of its intimate adherence to the insertion of the muscle, it is always divided simultaneously with it. Even in the subconjunctival operation, although the conjunctiva which covers this portion of the capsule is left intact, the capsule itself is divided along the whole breadth of the insertion of the muscle. This vertical incision of the capsule of Tenon, which always takes place simultaneously with the tenotomy, is the cause of the retrocession of the anterior part of the capsule covering the muscle, and of the annular portion of the capsule which keeps the muscle fixed, and consequently, also, the retrocession of the muscle itself. By increasing the length of the incision in the capsule (Graefe's division of the lateral processes), we may certainly produce a somewhat greater retrocession; but, owing to the second point mentioned above, it cannot be very extensive. For the connection of the conjunctiva with the capsule does not permit a more considerable retrocession of the latter, unless we make an extensive vertical incision in the conjunctiva, analogous to that in the capsule, and thus jointly divide the conjunctiva, capsule, and tendon. Such a proceeding is, however, accompanied by considerable disadvantages. On account of the connection between the muscle, capsule, and caruncle, the divided muscle draws the caruncle and the semilunar fold backwards and inwards, as well as that portion of the conjunctiva which was divided by the vertical incision. In consequence of this, these parts assume the same position when the eye looks straight forward, which they do in the normal eye when it is turned very far inwards. At the same time, the distance between the semilunar fold and the inner edge of the cornea is increased, as also the portion of sclerotic visible at the inner angle of the eye; and this gives to the eye that peculiarly disagreeable appearance which was so characteristic of the old operation."

Based upon the above considerations, Prof. L. recommends the following modification of the operation for strabismus:—

"If the internal rectus is to be divided, I raise with a pair of forceps a fold of conjunctiva at the lower edge of the insertion of the muscle; and, incising this with scissors, enter the points of the latter at the opening between the conjunctiva and the capsule of Tenon; then carefully separate these two tissues from each other as far as the semilunar fold, also separating the latter, as well as the caruncle, from the parts lying behind. When the portion of the capsule which is of such importance in the tenotomy has been completely separated from the conjunctiva, I divide the insertion of the tendon from the sclerotic in the usual manner, and extend the vertical cut, which is made simultaneously with the tenotomy, upwards and downwards—the more so if a very considerable effect is desired. The wound in the conjunctiva is then closed with a suture.

"The same mode of operating is pursued in dividing the external rectus; and the separation of the conjunctiva is to be continued as far as that portion of the external angle which is drawn sharply back when the eye is turned outwards."

Prof. L. claims the following advantages for his proceeding:—

"1. It affords the operator a greater scope in apportioning and dividing the effect of the operation between the two eyes.

"2. The sinking back of the caruncle is avoided, as well as every trace of a cicatrix, which not unfrequently occurs in the common tenotomy.

"There is no need for more than two operations on the same individual, and therefore of more than one on the same eye."

38. *Quinia in Rheumatic Iritis.*—M. GALEZOWSKI had under treatment a young man affected with rheumatic iritis of the right eye, subsequent to rheumatism. The disease had been treated in various ways during six months, when M. Galezowski applied sulphate of atropia to the eye, and gave quinia in large doses internally. The disease was cured in a fortnight. In another case, also of rheumatic iritis with painful swelling of the right foot, M. Galezowski gave sulphate of quinia successfully. From these and similar facts, he concludes that sulphate of quinia is one of the most efficacious remedies for rheumatic iritis.—*Brit. Med. Journ.*, Jan. 19, 1867, from *Gaz. Méd. de Lyon.*

39. *Pathology of Hemeralopia.*—The *Ophthalmic Review* for October last contains an interesting paper by Prof. A. QUAGLINO, of Pavia, translated from

the *Giorn. d'Oftalm. Ital.*, vol. viii. p. 23. Prof. Q. states that night blindness is a very common affection during spring and summer among the Italian peasantry, and soldiers in camp, sometimes affecting whole regiments of the latter, so as to render them unfit for service between twilight and dawn of day.

Prof. Q. thinks it important to call attention to this affection, with the view of showing that, instead of its being the nervous disease it was formerly considered, it is rather a symptom of a material and recognizable morbid process, which, though slight, and susceptible of spontaneous cure in the early stages of the disease, provided the patients withdraw themselves from the action of bright light, yet may be in time and after repeated recurrences, the point of origin of more serious alterations of the retina and optic nerve that may eventually lead to amblyopia or even amaurosis.

Prof. Q. gives the following as the constant alterations which he has found, on examination with the ophthalmoscope, in thirty soldiers. They were observed at different epochs from the commencement of the disease—some on the first, second, or third day, and others after weeks or months:—

"1. Whitish-gray haziness of the whole retina, especially around the disk and along the retinal vessels, after invading the disk itself. This haziness is more or less intense according to the duration of the disease, and the degree that the vision has become impaired. In consequence of it the subjacent vascular layer of the choroid is distinguished with much difficulty by the ophthalmoscope. The retinal haziness gradually disappears in soldiers after some days in a dark room, or after other treatment.

"2. Manifest congestion of the veins; they are also tortuous, and contain a dark blackish blood, seeming almost coagulated.

"3. The central arteries are often enlarged in the region of the disk, but when the disease has lasted for some time, they appear lessened and hidden here and there in the parenchyma of the retina, which presents a thickened appearance.

"4. In many cases, when the disease is recent, the disk looks red or roseate through most delicate injection of the capillaries, and development of collateral vessels. In these cases also the rete of vorticose choroidal vessels appears closer, the vessels redder and more swollen.

"5. The obscuration of the retina is in time dissipated, the purple transparency being restored; but both the arteries and the veins become smaller and more slender, and the contours of the disk lose their regularity and are fringed by streaks of dark pigment. Many times the radial fibres of the optic nerve become opaque, so as to render the bounds of the disk indistinguishable from the rest of the retina, which is also slightly clouded.

"6. When the disease has many times recurred, and the patient become amblyopic, the appearances first mentioned are usually replaced by those of atrophy of the vessels and disk, attended by the characteristic white reflection of the nervous substance, more or less marked.

"It results from the alterations described that the process on which the hemeralopia depends is seated in the extremity of the optic nerve, in the retina, and in its vessels; and that the affection must be considered as a venous stasis, accompanied by serous infiltration of the retinal substance, and of the nervous fibres of the optic nerve, which form the disk.

"This serous exudation impairs the transparency of the retina, renders it grayish and consequently visible, and compresses the layers of rods and cones, making them less apt to receive the rays which emanate from objects illuminated by too weak a light, such as that of twilight or of night.

"The symptom of hemeralopia is not confined exclusively to this single species of retinitis, and does not constitute, *per se*, a special form; for it is often found in syphilitic retinitis, in serous retinitis albuminurica, in amaurosis from progressive atrophy of the optic nerves with or without pigmentary degeneration, and sometimes also in arthritic or rheumatic choroiditis, in which there is an evident compression of the bacillary layers.

"Hemeralopia is a frequent symptom in cases of pellagra, terminating sometimes in progressive atrophy of the optic nerves, a result promoted and sustained by chronic pio-meningitis, which is developed in many cases, and the occasion of all those other nervous perturbations accompanying the disease to which we are referring.

"The predisposing causes of this disease are no doubt those abnormal conditions of the abdominal viscera which favour venous stasis in the region of the superior cava, such as long-continued intermittent fevers which have left infarctus in these viscera, gastric fevers, and the scorbutic dyscrasy. The exciting causes are the dazzling light of the sun, the white reflection of the earth, or the glittering one of water, through which the retina, by excess of stimulus, becomes irritated and congested. Probably some part is also played by suppression of perspiration and the rheumatic poison.

"Hemeralopics have generally a leucophlegmatic appearance, are of a yellow colour, or even a decidedly jaundiced hue, showing the disturbed action of the liver, and have swollen gums readily bleeding.

"Hemeralopia frequently recurs in soldiers who return to camp too soon after treatment, and in the same season in which the disease attacked them. It often supervenes in spring or in the following summer. We have observed cases in which the patients were hemeralopic for the fourth or fifth time, and who yet recovered perfectly."

MIDWIFERY.

40. *Protracted Utero-gestation.*—Dr. C. Joynt relates, *Dublin Quart. Journ. Med. Sci.*, Nov. 1866, a case of this, which seems to have been most carefully investigated and with the result of showing that the minimum duration of pregnancy must have been 317 days, or about six weeks more than the average. The subject of the case was a lady about 30 years of age, who had been pregnant six times, the pregnancy on two occasions ending in miscarriage. She suffered from excessive menstruation, and neuralgia of the ovaries, and was also subject to frequent hystero-epileptic fits.

41. *Postural Treatment in Prolapse of Umbilical Cord.*—Dr. J. G. Wilson, Lecturer on Midwifery in Andersonian University, in an article in the *Glasgow Medical Journal* for Nov. 1866, extols the postural treatment in prolapse of the umbilical cord first described by Dr. J. G. Thomas, of New York, and relates two cases in which he resorted to it with success. This method he says is "so simple and so safe, 'and so in accordance with common sense,' that I believe it will commend itself to general adoption, and that it will ere long supplant and supersede all the modes of management commonly had recourse to in cases of descended cord."

42. *Fracture of the Pelvis in a Pregnant Woman; Recovery.*—Dr. Fairbank reported to the Obstetrical Society of London, the case of a woman who in the sixth month of her pregnancy was crushed between the wheel of a wagon and the parapet of a bridge. Immediately on this happening there was a gush of blood from the vagina, and on removing the woman to her home, which was not far off, Dr. Fairbank was able to find that the pelvis was fractured, the fracture passing through the horizontal ramus of the pubes into the obturator foramen. The patient was chilly all over, her pulse was slow, and she was very pale. This happened in the afternoon, and when visited later her pulse was found to be rather better, but as the evening wore on she became more and more restless, the pulse rose to 150 per minute; still she was able to pass urine. She spent a bad night, with occasional vomiting, and in the morning her abdomen was tense, her countenance anxious, and no fœtal sound could be heard. She got several doses of opium, and warm fomentations were applied over the injured parts. On the third day she was still more feeble, and her pulse was softer, but the vomiting still continued, and there was a certain amount of tenderness over the abdomen. On the 4th she was better, the pulse was 100, urine natural, and a strong belt was applied so as to compress the pelvis; from this she felt great